

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323**U/R**

OK P14519

Page 1

Item ID: D119-646-041

Accept

N900040100

Setup Start

NS1

Revision ID: URF 15-560

Item Name: Replacement Skidtube with Wearpads, Fits LH or RH

Stop

NS2

Start Date: 5/18/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/9/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: MLJDate: MAY 06 2016

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3887-041	D								
IIN-D119-646	C								

100

0.00

100

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D119-646-041

CHG004

DAS
21
9-89

JUL 27 2016

110

0.00

110

Skidtubes

Memo

0.00

Skidtubes

1- inspect Mat'L D2500-1-190 for damage

2-Cut tube to length as per dwg D3887 (154.8")

3- Ensure squareness of ends and scribe batch#

16-7-12 MG
Sh

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 2

Item ID: D119-646-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: URF 15-560 Stop ***NS2***
Item Name: Replacement Skidtube with Wearpads, Fits LH or RH
Start Date: 5/18/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/9/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Chemical Conversion Coat per QSI005 4.1	0.00							
120 HandFinish Hand Finishing	Memo	0.00							
121	QC7-Inspect Chemical Conversion Coat	0.00							
121 QC Quality Control	Memo	0.00							
122	QC5- Inspect part completeness to step on W/O	0.00							
122 QC Quality Control	Memo	0.00							

Handwritten notes:
16-7-13 HGL/LH
1 0 15-07-13
1 0 15-07-13

Stamps:
DAS 18 9-89
DAS 18 9-89

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 3

Item ID: D119-646-041

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N900040100Setup Start ***NS1***

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Stop ***NS2***Start Date: 5/18/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 6/9/2016 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

0.00

130

Skidtubes

Skidtubes

Memo

0.00

1- Install drill Jig DT9477 drill X-bolt spacer pilot holes using 3/16" drill first side only.

2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes.

3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9477

4- Open crossbolt spacer holes to finished size as per dwg D3887 (section D-D and E-E) ***DO NOT OPEN FWD Saddles Holes***

5- Deburr, blow out chips from inside of tube.

6- Bond web in place as per Dwg D3887 & QSI 015.

A/RSikaflex-291 134743Sikaflex expire date: 16-12-8Start: 15H06 Time: _____Finish: 15H25 Time: _____

***** (Adhere for 12 hours) *****

16-7-13 M.G./R.L.

DAS
19
9-89

16-7-13 M.G./R.L.

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 4

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
135	QC5- Inspect part completeness to step on W/O	0.00							
135									
QC	Memo	0.00							
Quality Control									

DAS
18
8-09
1 0 16-07-15

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 5

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140

140

Skidtubes

Skidtubes

Memo

0.00

1- Bend FWD end of tube using bender 1 and FOLIO 31 bend prog. D3887.***Must use bending aid DT9544, ensure proper positioning***

2- Cut FWD end of tube as per dwg D3887.***Verify measurement***

3- Buff out marks left from bending

4- Drill FWD cap holes using DT8215. Open FWD & AFT cap holes to 0.208"

5- Open FWD saddle holes to finished size as per dwg D3887

6- Drill FWD x-bolt spacer holes using DT9816 and open to finished size.(verify measurement)

7- Drill Tow ring hole, using DT10047 locate from FWD saddle hole. (verify measurement). Open to finished size.

8- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole. (verify measurement) as per dwg.

9- C'sink FWD cap hole as per detail "C"

10- Drill holes for wearpads using DT8931, open to 0.297".

11- Countersink crossbolt spacer holes, and prepare tube for welding, deburr.

12- Deburr and blow out chips from inside of tube.

16-7-15 ALH JW

16-7-18 ALH

DQA: _____ Date: _____

QA Closed: ~~16/08/09~~ Date: 16/08/09

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>145323</u> Part No. <u>119-646-041</u> NCR No. <u>16-5952</u>		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☒</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☒	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Date: <u>16-07-19</u>		Step #: <u>140</u>		QTY Effective: <u>①</u>		MRB (QSI042) Approval <u>DAS</u> <u>12</u> <u>9-89</u> <u>16/7/19</u>																																																																	
Description Work Order Deviation Countersink in FWD cap hole is too deep R.C. tool "slip" during C'sink.				Disposition Fill with weld and re-drill. Acceptable. This is non-structural in this region.				Completed By <u>16-07-19</u> <u>16-7-19</u> Lead hand / Supervisor Approval Verification <u>DAS</u> <u>9</u> <u>9-89</u> <u>16-07-19</u> QC / QA Coordinator Approval <u>DAS</u> <u>9</u> <u>9-89</u> <u>16-07-19</u>																																																															
Root Cause <table style="width:100%; border: none;"> <tr><td>Environment ☐</td><td>No Re-verification ☐</td></tr> <tr><td>Design ☐</td><td>Operator ☒</td></tr> <tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr> <tr><td>Equip/Tooling ☐</td><td>Supplier ☐</td></tr> <tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr> <tr><td>Material ☐</td><td>Use for Testing ☐</td></tr> <tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr> <tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr> <tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr> <tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr> <tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr> <tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr> </table>				Environment ☐	No Re-verification ☐	Design ☐	Operator ☒	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td>Pressure/Forced ☐</td><td>Temperature/Cure ☐</td><td>Power Loss/Surge ☐</td><td>Positioned Wrong ☐</td></tr> <tr><td>Bending ☐</td><td>Set-up ☐</td><td>Folio/Program ☐</td><td>Outside Dimensions ☐</td></tr> <tr><td>Centre Not Concentric ☐</td><td>BOM/Route ☐</td><td>Grain ☐</td><td>Over/Under tolerance ☐</td></tr> <tr><td>Cracks ☐</td><td>Broken/Damage/Defect ☐</td><td>Weld ☐</td><td>Part Incorrect ☐</td></tr> <tr><td>Crimp/Kink/Ripple/Wave ☐</td><td>Inspection Incomplete/Unqualified ☐</td><td>Wrong Stock Pulled ☐</td><td>Part Lost/Missing ☐</td></tr> <tr><td>Cuffs ☐</td><td>Contamination ☐</td><td>Out of Sequence ☐</td><td>Part Moved ☐</td></tr> <tr><td>Crushing ☐</td><td>☒ Countersink</td><td>Off-set ☐</td><td>Drawing ☐</td></tr> <tr><td>Heat Treat ☐</td><td>Cut Too Short ☐</td><td>Mislabeled ☐</td><td>Finish ☐</td></tr> <tr><td>Wave/Twist in Tube ☐</td><td>Instructions Incomplete/Unclear ☐</td><td>Fit/Function ☐</td><td>Misread ☐</td></tr> <tr><td>Marks/Chatter ☐</td><td>Drill Holes ☐</td><td>Misaligned/off center ☐</td><td>Turning Sequence ☐</td></tr> </table>				Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	☒ Countersink	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
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OTHER : _____																																																																							

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 6

Item ID: D119-646-041

Accept

N9000040100

Setup Start

NS1

Revision ID: URF 15-560

Stop

NS2

Item Name: Replacement Skidtube with Wearpads, Fits LH or RH

Start Date: 5/18/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/9/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.00

Quality Control

DAS
18
9-891 0 160719

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 7

Item ID: D119-646-041 **Accept** ***N900040100*** **Setup Start** ***NS1***
Revision ID: URF 15-560 **Stop** ***NS2***
Item Name: Replacement Skidtube with Wearpads, Fits LH or RH
Start Date: 5/18/2016 **Start Qty:** 1.00 ***1*** **Cust Item ID:**
Required Date: 6/9/2016 **Req'd Qty:** 1.00 ***1*** **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** ***NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160									
Skidtubes	Memo	0.00							
Skidtubes	NOTE:TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST HIT FWD GROUND HANDELING FIXTURE,IF FIXTURE FITS WELL THEN PROCEED. FIXTURE DT10091.								
	1-Insert crossbolt spacers. Weld as per QSI 004 and Dwg D3887. Remember to back drill each hole before welding the other side. Use aluminum rod A/RAluminum Rod <i>m134826</i>								
	2-Grind cross bolt welds flush as per Dwg D3887. Ensure no pin hole.								
	3-Counterbore 5/16" x 0.750" deep as per Dwg D3887.								
	4- Deburr & Scribe batch # on Aft end of tube.								
170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.00							
Quality Control	TEST FIT USING FIXTURE DT10091.								

> DE 16-07-20

> 16-7-20

**DAS
19
9-89**

**DAS
38
9-89**

JUL 20 2016

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 8

Item ID: D119-646-041 Accept ***N900040100*** Setup Start ***NS1***
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00				<u>1</u>			DAS 38 9-89 JUL 20 2016
190 *190* HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.	0.00 0.00				<u>4</u>			DAS 34 9-89 20160720 BEB
200 *200* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>m 134798.</i> Memo START TIME: <u>8:35.</u> OVEN TEMPERATURE: <u>320°</u> FINISH TIME: <u>9:05.</u>	0.00 0.00				<u>1</u>	<u>1607-25</u>	<u>333</u>	

☆
SEE
Attached

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 9

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC3- Inspect Part Finish	0.00							
210									
QC	Memo	0.00							
Quality Control									
220		0.00							
220									
HandFinish	Memo	0.00							
Hand Finishing	1-Install inserts as per Dwg D3887.								
230	QC5- Inspect part completeness to step on W/O	0.00							
230									
QC	Memo	0.00							
Quality Control									

DAS
15
9-89233
9-89

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 10

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240		0.00							
240									
HandFinish	Memo	0.00							
Hand Finishing	1-Install wearpads, gaskets as per Dwg D3887. Put sikaflex in insert before installing bolts and washers A/R Sikaflex-240/-291 <u>M1135204</u> Sikaflex expire date: <u>17102</u>								<u>11 g of All 6/62/27</u>
	2-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: <u>M113314</u> , <u>RTU 598 M135047 16109</u>								
	3 -Inspect for foreign objects as per QSI 024								
	4 -Install Aft Cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 <u>M1135204</u> Sikaflex expire date: <u>17102</u>								
245	QC5- Inspect part completeness to step on W/O	0.00							
245									
QC	Memo	0.00							
Quality Control									<u>1</u>

DAS
38
9-89
JUL 27 2016

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 11

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Wing Walk as per dwg QSI005 4.4 Batch <u>134449</u>	0.00							
250									
HandFinish	Memo	0.00							
Hand Finishing									
251	QC3- Inspect Part Finish	0.00							
251									
QC	Memo	0.00							
Quality Control									
260	Identify as per dwg & Stock Location <u>147038</u>	0.00							
260									
Packaging	Memo	0.00							
Packaging									

DAS
38
9-89
JUL 27 2016

Work Order ID 145323

Thursday, May 05, 2016 1:32:50 PM

145323

Page 12

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Revision ID: URF 15-560 Stop ***NS2***
Item Name: Replacement Skidtube with Wearpads, Fits LH or RH
Start Date: 5/18/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/9/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	QC21- Final Inspection - Work Order Release	0.00							
270							DAS 21	JUL 27 2016	
QC	Memo	0.00					9-89		
Quality Control									

DAS
21
9-89

JUL 27 2016

Picklist Print

Thursday, May 05, 2016 1:32:54 PM

Page 1
15

Work Order ID: 145323

145323

Parent Item: D119-646-041

D119-646-041

Parent Item Name: Replacement Skidtube with Wearpads, Fits LH or RH

Start Date: 5/18/2016

Required Date: 6/9/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP RevA: New issue DD verified by:EC
10.02.22 per PAR 09-043 EC verified by:DD IPP rev B
(DEOD3887-B-1)(ecn 12-675) DD verf:JLM IPP REV:D 13.03.20 per
chg003 ECN13-534 DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-190 *D2500-1-190* Ext'n -I' Beam Tube 4"		Manufactured	No			110	Each	65.0000	1	1			
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					LG002			65					
					140538			65					
D2579 *D2579* Crossbolt Spacer		Manufactured	No			140	Each	199.0000	2	2			
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					LG001			199					
					123997			1					
					141711			198					
D2855-3 *D2855-3* Cap		Manufactured	No			240	Each	33.0000	2	2			
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					FP001			33					
					137525			33					

**

16-7-12 MG

**

BE 16-07-19

**

all 16/07/25

13142564

22

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Thursday, May 05, 2016 1:32:54 PM

Page 2

Work Order ID: 145323

145323

Parent Item: D119-646-041

D119-646-041

Parent Item Name: Replacement Skidtube with Wearpads, Fits LH or RH

Start Date: 5/18/2016

Required Date: 6/9/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1611-005

Purchased

No

240

Each

463.0000

16

16

NAS1611-005

O-RING

ll 16/07/25

LocationLoc QtyLoc Code

FP001

463

m129198

11

m133498

316

m134488

136

x16

D3492-5

Manufactured

No

240

Each

52.0000

16

16

D3492-5

Plug

ll 16/07/25

LocationLoc QtyLoc Code

FP001

52

133396

8

136396

6

138198

2

141422

36

B142818

x16

D3672-1

Manufactured

No

240

Each

634.0000

2

2

D3672-1

Washer, Phenolic

ll 16/07/25

LocationLoc QtyLoc Code

FG

10

85222

10

FP001

70

112218

70

ST049

54

127322

54

ST051A

500

134785

500

x7

Picklist Print

Thursday, May 05, 2016 1:32:54 PM

Page 3

Work Order ID: 145323

145323

Parent Item: D119-646-041

D119-646-041

Parent Item Name: Replacement Skidtube with Wearpads, Fits LH or RH

Start Date: 5/18/2016

Required Date: 6/9/2016

Start Qty: 1.00

Required Qty: 1.00

D3681-1 Manufactured No

160 Each 168.0000 8 8

D3681-1

Spacer

*BE 16-07-19
8145956 *B*

Location

Loc Qty

Loc Code

LG001

168

142904

168

D3847-1 Manufactured No

240 Each 35.0000 5 5

D3847-1

Wearpad

ll 14/03/25

Location

Loc Qty

Loc Code

FP001

35

138338

10

142743

3

142854

22

D3847-11 Manufactured No

240 Each 40.0000 1 1

D3847-11

Wearpad

ll 16/07/25

Location

Loc Qty

Loc Code

FP001

40

138418

1

141896

15

142783

24

D3885-1 Manufactured No

140 Each 3.0000 1 1

D3885-1

Standard Web

16-7-13 MG

Location

Loc Qty

Loc Code

LG002

3

142201

3

Thursday, May 05, 2016 1:32:54 PM

Shop Packet Print

Page 3

Picklist Print

Thursday, May 05, 2016 1:32:54 PM

Page 4

Work Order ID: 145323

145323

Parent Item: D119-646-041

D119-646-041

Parent Item Name: Replacement Skidtube with Wearpads, Fits LH or RH

Start Date: 5/18/2016

Required Date: 6/9/2016

Start Qty: 1.00

Required Qty: 1.00

D3903-1 Manufactured No

160 Each

350.0000 12 12

D3903-1

Spacer

**

8/16/07/9

Location

Loc Qty

Loc Code

LG001

350

142730

350

12

ALS4-1032-130 AELS4-1032-130 Purchased

No

220 Each

4,742.000 30 30

ALS4-1032-130

Rivnut

**

11/16/07/27

Location

Loc Qty

Loc Code

CCK005

2900

M134502

2900

FP001

1842

M133077

172

M134502

1670

x30

AN3CSA Purchased

No

240 Each

1,471.000 32 32

AN3CSA

Bolt

**

11/14/07/25

Location

Loc Qty

Loc Code

FG

5

122800

5

FP001

10

M133686

10

OVER002

1400

M134502

1000

M134676

400

x32

ST350

56

M133234

56

Thursday, May 05, 2016 1:32:54 PM

Shop Packet Print

Page 4

Picklist Print

Page 5

Thursday, May 05, 2016 1:32:54 PM

Work Order ID: 145323

145323

Parent Item: D119-646-041

D119-646-041

Parent Item Name: Replacement Skidtube with Wearpads, Fits LH or RH

Start Date: 5/18/2016

Required Date: 6/9/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

Each

3,049.000

32

NAS1149C0332R

WASHER

Location

Loc Qty

Loc Code

FP001

1582

m132262

4

m132930

1004

m134063

446

m134073

128

GA

225

m133284

225

ST266

1242

m134474

142

m134574

1000

m134654

100

M 135046

x32

all 16/07/25

MS24694-C52

Purchased

No

Each

101.0000

2

MS24694-C52

SCREW

Location

Loc Qty

Loc Code

FP001

95

m127059

17

m133855

78

ST287

6

124308

6

x2

all 16/07/25



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 145323M-

2014 NOV 24 *cp*
ECU 14-680

15.04.30 URF15-560 AP

- | | | | |
|------------|--|--|--------------|
| D | REVISED SEND TOLERANCES FOR MANUFACTURABILITY,
13.07 WAS 13.04 (ZN C4-5, ADD 5.75 (ZN C2-3), ADD
11.84 (ZN C6-7), DELETE DIMENSIONS (RDM, R12) | DB | 13.09.20 |
| C | IDENTIFY MFG. CHG. C-2 C4-DIMEN 13, QTY 2 WAS 4
ITEM 45 WAS 34, ITEM 44, QTY 30 WAS 32, ADD
ITEM 46, DISCARD C-2 WAS ANCA24, 2 PLCS. (ZN C1-
C4, C5, C6, C7) CHG. 0.000 TO 0.000 WAS 0.014 (THRU),
ADD DETAIL F (ZN C4-5, C6-8, B-7), ADD ITEM 7,
D5575 CROSS SLOT SPACER (ZN D4-1, A5-7)
ALBA-R32-150 WAS A5-5, 1032-150 (ZN C4-1, C5-7,
ADD DIMEN 13, ADD 13.04 (ZN C4-5, C6-8) B2855-3
WAS D2575 (ZN D4-1, C2-3, C2-3, C2-3, C7-4, C2-3)
WAS D2575 (ZN C4-1, C2-3, C2-3, C2-3, C2-3, C2-3, C2-3, C2-3)
C2-4, 0.013 WAS 0.013 (ZN C4-5, C4-5, C2-3 & B-7)
REVISED NOTE 1 (ZN B-7) | DB | 13.02.19 |
| B | | RF | 09.06.30 |
| A | NEW ISSUE | RF | 09.03.30 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | RF | DART AEROSPACE USA, INC.
KENT, WA
DRAWING NO.
D3887
TITLE
A119 STD SKIDTUBE ASSY
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| DRAWN | DB | | |
| CHECKED | | | |
| MFG. APPR. | | | |
| APPROVED | | | |
| DE APPR. | | REV. | SHEET 1 OF 1 |
| DATE | 13.09.20 | SCALE | NAT |

AN3CSA BOLT
D3672-1 PHENOLIC WASHER
NAS1149C0332R WASHER
(1 PER SIDE)

SEAL WITH
SIKAFLEX-241/291

D2855-3 CAP

D3847-11
WEARPAD

1.5
1.5
1.5
2.00 DISTANCE TO D3885-1 WEB, REF

BLACK ANTI-SKID TO 0.5
ABOVE LOCATION RIDGE
TYP

11
Ø0.197
8 PL PER SIDE
REF

AN3CSA BOLT
NAS1149C0332R WASHER
24 PL

PLUG UNUSED INSERTS WITH
AN3CSA BOLT
NAS1149C0332R WASHER
8 PL

D3847-1
WEARPAD
5 PL

D2855-3 CAP

SEAL WITH
SIKAFLEX-241/291

MS24694-C82 SCREW
(1 PER SIDE)

D3887-041 STANDARD SKIDTUBE ASSY WITH WEARPAD
(MAKE FROM D3887-11)

UNDER REVIEW

15.04.30 URF15-580 AP

RELEASED

2014 NOV 24 *q*

DESIGN	RF	DART AEROSPACE USA, INC.	
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MFG. APPR.		D3887	SHEET 2 OF 8
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AN3CSA BOLT
D3672-1 PHENOLIC WASHER
NAS1149C0332R WASHER
(1 PER SIDE)

SEAL WITH
SIKAFLEX-241/291

D2855-3 CAP

D3847-11
WEARPAD

D3847-047
AFT WEARPLATE ASSY

AN3CSA BOLT
NAS1149C0332R WASHER
30 PL

D3847-045
CENTER WEARPLATE ASSY

D3847-043
FWD WEARPLATE ASSY

D3847-1
WEARPAD
5 PL

BLACK ANTI-SKID TO 0.6
ABOVE LOCATION RIDGE
TYP

11
Ø0.187
8 PL PER SIDE
REF

D2855-3 CAP

SEAL WITH
SIKAFLEX-241/291

MS24694-C52 SCREW
(1 PER SIDE)

D3887-043 STANDARD SKIDTUBE ASSY WITH WEARPLATE
(MAKE FROM D3887-11)

UNDER REVIEW

15.04.30 URF15-580 AP

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2014 NOV 24 *q*

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AN3CSA BOLT
D3672-1 PHENOLIC WASHER
NAB1146C0332R WASHER
(1 PER SIDE)

SEAL WITH
SIKAFLEX-241/291

D2865-3 CAP

AN3C46A BOLT
D3804-1 WASHER, 2 PL
MS21043-3 NUT
8 PL

D3849-043
AFT TRAINING WEARPLATE ASSY

BLACK ANTI-SKID TO 0.5
ABOVE LOCATION RIDGE
TYP

1.5
1.5
1.5

2.00 DISTANCE TO D3885-1 WEB

1.5
1.5

1.5 D2865-3 CAP

SEAL WITH
SIKAFLEX-241/291

MS24894-C52 SCREW
(1 PER SIDE)

D3849-041
FWD TRAINING WEARPLATE ASSY

UNDER REVIEW

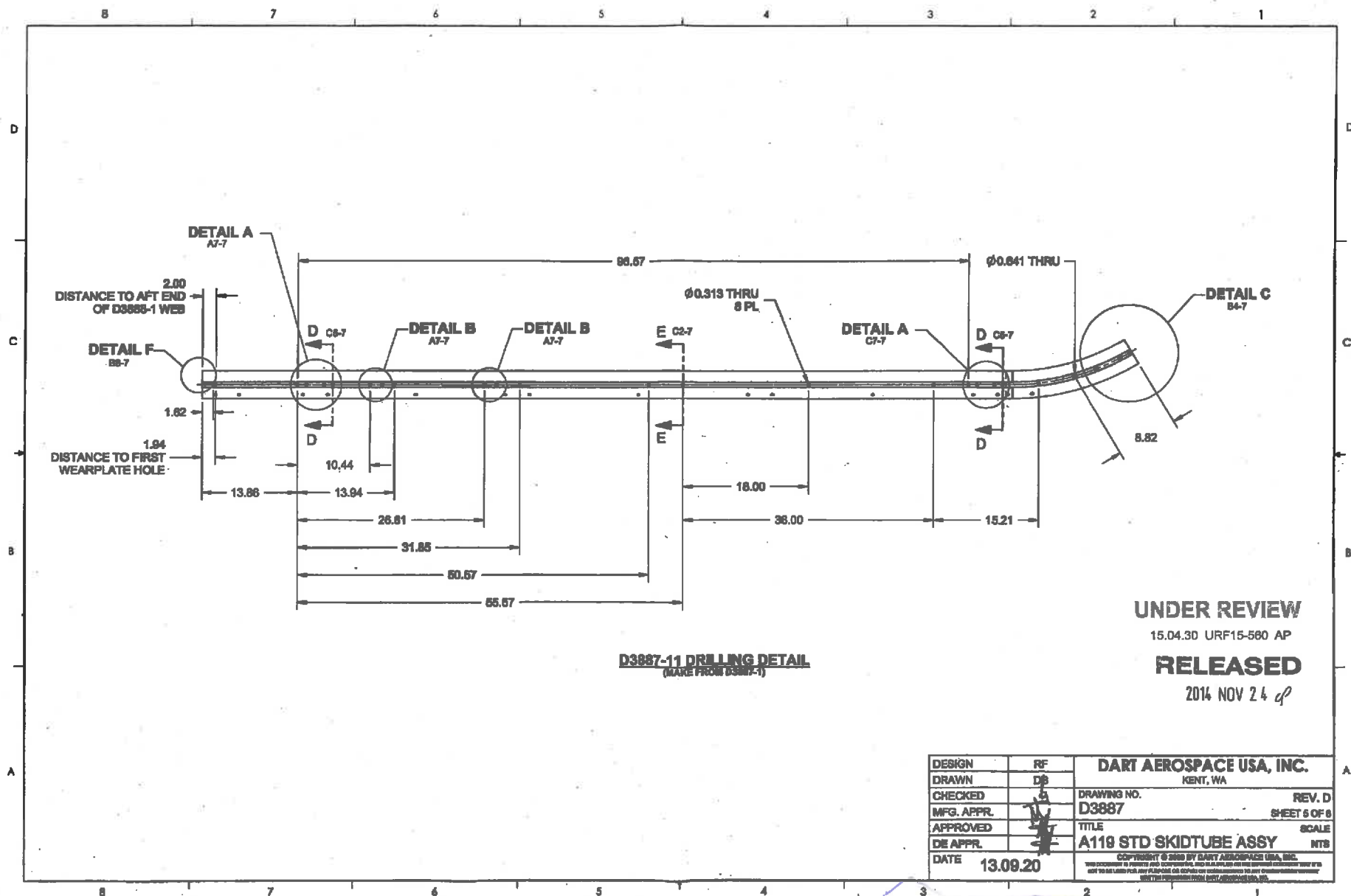
15.04.30 URF15-580 AP

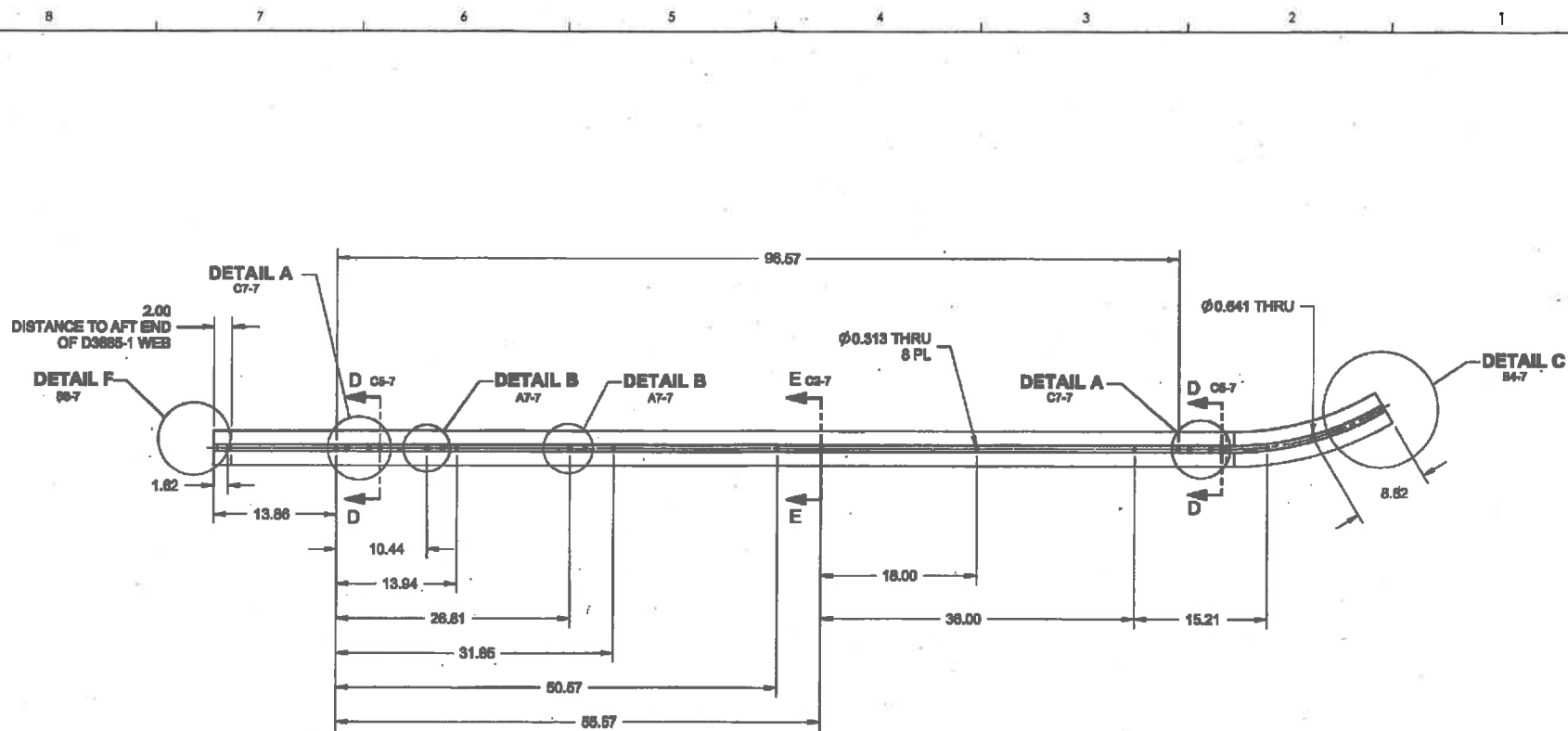
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2014 NOV 24 *dp*

D3887-045 STANDARD SKIDTUBE ASSY WITH TRAINING WEARPLATE
(MAKE FROM D3887-13)

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MFG. APPR.	<i>[Signature]</i>	SHEET 4 OF 8	
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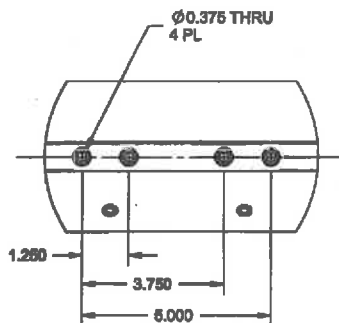


D3887-13 DRILLING DETAIL
(MAKE FROM D3887-1)

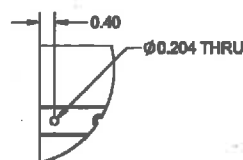
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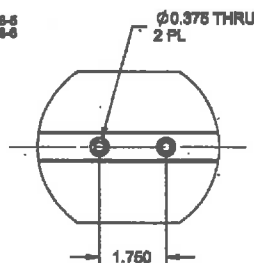
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MFG. APPR.		D3887	SHEET 8 OF 8
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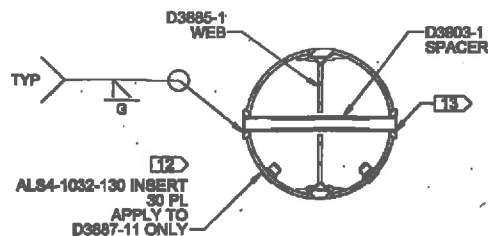
DETAIL A
SCALE 4X
D7-5
C3-5
D7-6
C3-6



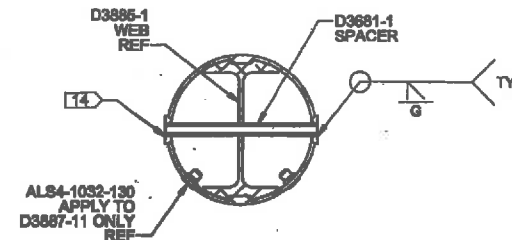
DETAIL E
SCALE 4X
C2-5
C3-6



DETAIL B
SCALE 4X
C8-5
C5-5
C8-6
C5-6



SECTION D-D
SCALE 4X
C7-5
C9-5
C7-6
C2-6
(FOR 12 X Ø0.375 HOLES
PER SKIDTUBE)



SECTION E-E
SCALE 4X
C4-5
C4-6
(FOR 6 X Ø0.313 HOLES
PER SKIDTUBE)

NOTES:

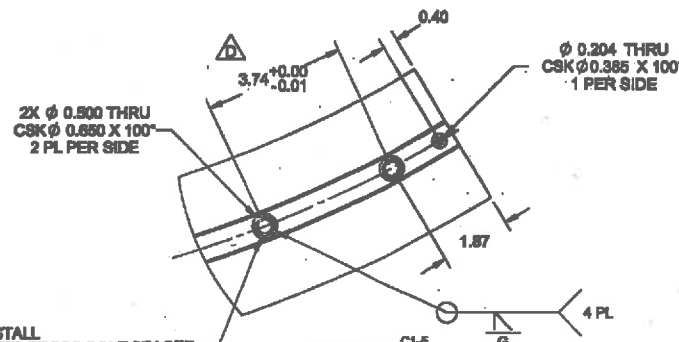
- 13) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
i) CHAMFER HOLES Ø0.475 x 45°
ii) INSERT D3803-1 SPACER
iii) WELD INTO PLACE AND GRIND FLUSH
iv) CBORE TO 0.313 x 0.75 DEEP
v) DEBURR HOLES
- 14) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.313 HOLES ONLY:
vi) CHAMFER HOLES Ø0.364 x 45° OR 0.060 DEEP x 45° (BOTH SIDES)
vii) INSERT D3881-1 SPACER
viii) WELD INTO PLACE AND GRIND FLUSH
ix) DEBURR HOLES

UNDER REVIEW

15.04.30 URF15-560 AP

RELEASED

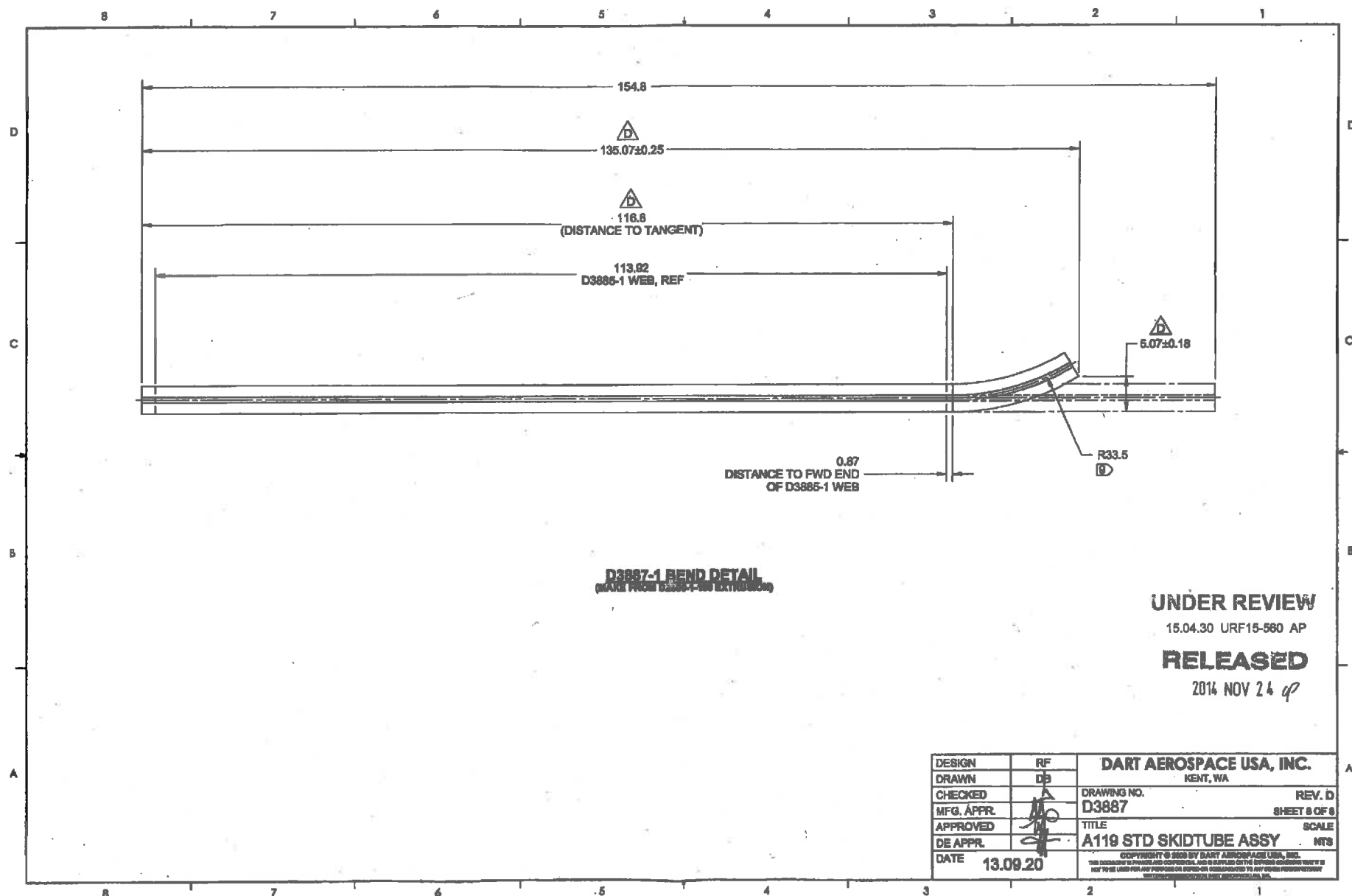
2014 NOV 24



DETAIL C
SCALE 4X
C1-5
C1-6

INSTALL
D2579 CROSS BOLT SPACER
2 PL

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DRAWN	DE	KENT, WA	
CHECKED	DE	DRAWING NO.	REV. D
MFG. APPR.	DE	D3887	SHEET 7 OF 8
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DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐		☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator ☐		☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup ☐		☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier ☐		☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training ☐		☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing ☐		☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information ☐		☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing ☐		☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement ☐		☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement ☐		☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process ☐		OTHER :							
Misidentified ☐	☐	Past Due ☐									

DQA:

Date:



QA Closed:

Date:

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only



Work Order:

145323

DISPOSITION

Rework



Scrap



Use-as-is



Suspected Unapproved



AGAINST DEPARTMENT/PROCESS

Skid-tube



Machining



Thermoforming



Large Fab



Cross tube



Small Fab



Finishing



Composite



Water Jet



Prod. Eng. Coord.



Rec/Store/Packaging



Supplier



Engineering



Quality



Other



Date:

16/5/16

Step #:

200

QTY Effective :

2

MRB (QSI042) Approval

DAS
12
9-89

16/5/9

Description Work Order Deviation

Disposition

No powder coat on saddle region per customer request.

Acceptable per attached masking instructions

Completed By

16-07-25

Lead hand / Supervisor
Approval VerificationDAS
9
9-89

16-07-28

QC / QA Coordinator
ApprovalDAS
9
9-89

16-07-28

Root Cause

Environment	☐	No Re-verification
Design	☒	Operator
Doc/Data	☐	Offset/Setup
Equip/Tooling	☐	Supplier
Handling/Pre	☐	Training
Material	☐	Use for Testing
Internal Transport	☐	Poor Information
Tribal Knowledge	☐	Rushing
LOA	☐	Product Improvement
Substation	☐	Process Improvement
Past Expiry Date	☐	Manufacturing Process
Misidentified	☐	Past Due

Pressure/Forced

Bending

Centre Not Concentric

Cracks

Crimp/Kink/Ripple/Wave

Cuffs

Crushing

Heat Treat

Wave/Twist in Tube

Marks/Chatter

FAULT CATEGORY

Temperature/Cure

Set-up

BOM/Route

Broken/Damage/Defect

Inspection Incomplete/Unqualified

Contamination

Countersink

Cut Too Short

Instructions Incomplete/Unclear

Drill Holes

Power Loss/Surge

Folio/Program

Grain

Weld

Wrong Stock Pulled

Out of Sequence

Off-set

Mislabelled

Fit/Function

Misaligned/off center

Positioned Wrong

Outside Dimensions

Over/Under tolerance

Part Incorrect

Part Lost/Missing

Part Moved

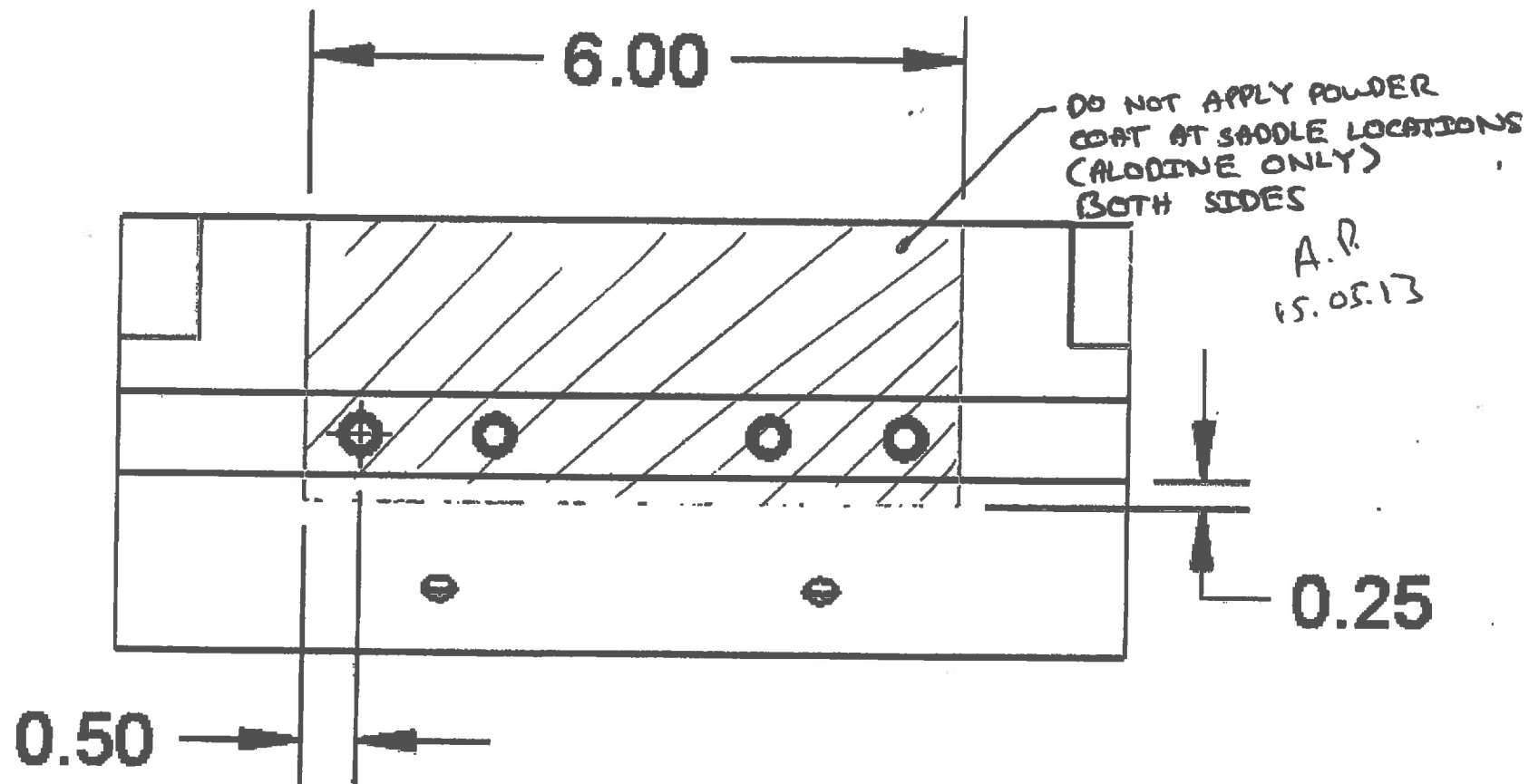
Drawing

Finish

Misread

Turning Sequence

☒ OTHER: Customer



DQA:

Date: 16.08.29



QA Closed:

Date: 16.08.15

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only



Work Order: <u>145323</u> Part No. <u>D119-646-041</u> NCR No. <u>16-0979</u>		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☒ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐			
Date: 16/3/16		Step #: 240		QTY Effective: ①		MRB (QSI042) Approval DAS 12 16/5/9 9-89	
Description Work Order Deviation				Disposition		Completed By	
Plug unused holes with AN3C4A Bolts rather than AN3CSA Bolts.				Acceptable AN3C-4A / M134861 (26)		Lead hand / Supervisor Approval Verification DAS 9 1607-28 9-89	
						QC / QA Coordinator Approval DAS 9 1607-28 9-89	
Root Cause Environment ☐ No Re-verification ☐ Design ☒ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Misabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ ☒ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐			
OTHER :							

